

• COLORADO RIVER •  
**AQUEDUCT NEWS**

THE METROPOLITAN WATER DISTRICT

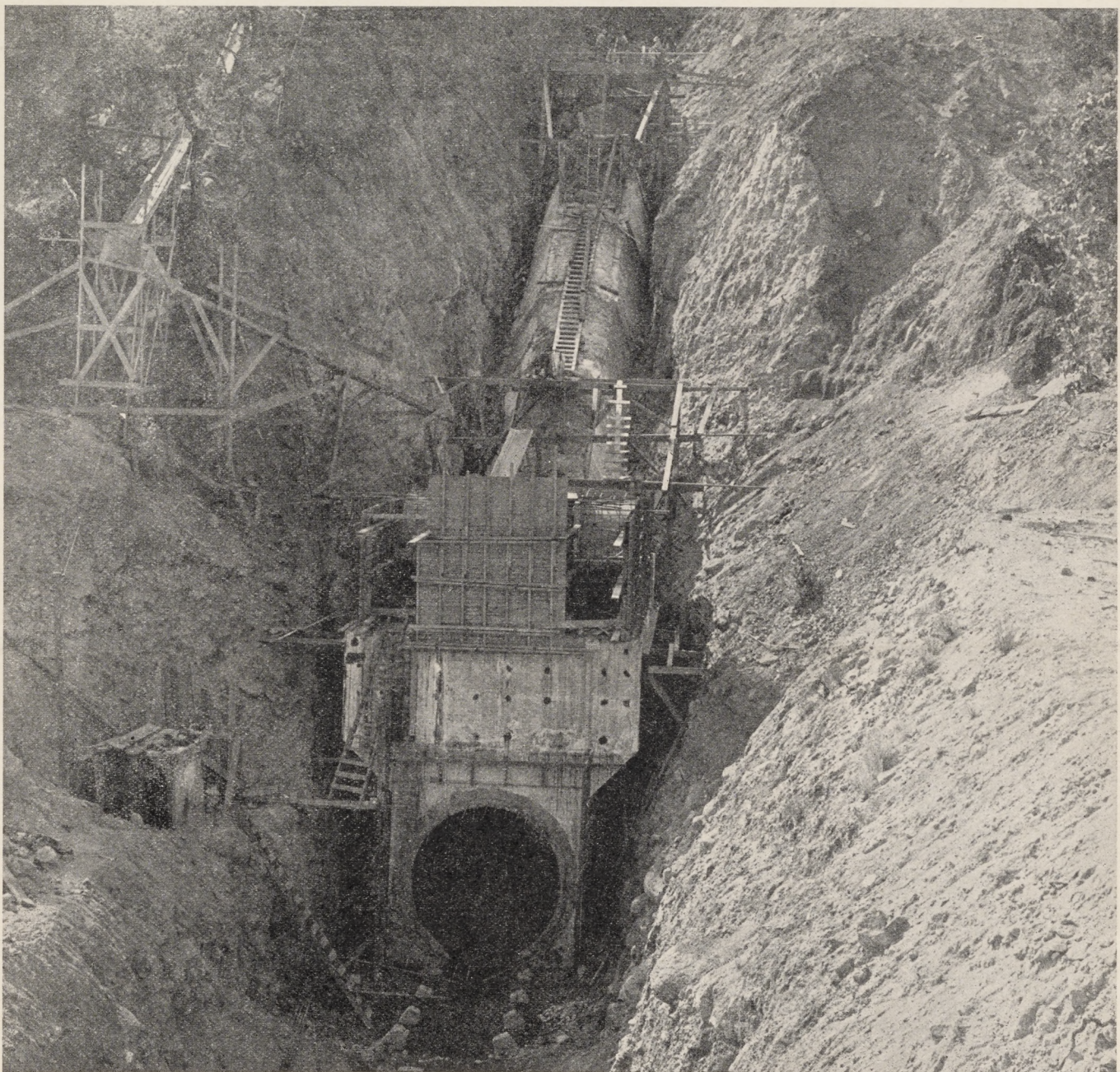


OF SOUTHERN CALIFORNIA

Vol. IV

NOVEMBER 25, 1937

No. 22



Monolithic siphon construction across Monrovia Canyon.  
(See note Page 2.)



# **COLORADO RIVER AQUEDUCT NEWS**

THE METROPOLITAN WATER DISTRICT

OF SOUTHERN CALIFORNIA

306 WEST THIRD ST.  
LOS ANGELES, CALIFORNIA

*Published twice monthly in the interest of Field and Office Workers on the Colorado River Aqueduct, and for the information of all other citizens of the Metropolitan Water District.*

Vol. IV November 25, 1937 No. 22

## **Parker Dam 240 Feet High—But 3 Feet Below River Surface**

Called "The deepest dam in the world" by the United States Bureau of Reclamation, Parker Dam on November 20 had a maximum height of 240 feet above the lowest point in its foundation. In spite of the fact that it was on that date about the height of a 22-story office building, it was still three feet lower than the normal water surface of the Colorado River at the dam site.

With a total of 205,470 cubic yards of concrete in place, the mass concreting of the dam on November 20 was 73 per cent completed. An estimated total of 297,900 cubic yards of concrete will be placed in the dam, the placing of which is expected to be completed in February of 1938. During the week ending on the 20th, a total of 14,311 cubic yards was placed.

The mass concrete temperature is now being reduced by the use of the cooling system which takes seepage water from the downstream sump. This water is cooled to 62 degrees and enters the dam from the upstream face. The temperature of this water as it comes out of the cooling coils on the downstream side averages about 109 degrees. Readings from thermometers set in the various blocks of the dam show an average temperature of about 135 degrees and a maximum temperature of 141 degrees. The specifications require that the dam must be cooled to an average temperature of 70 degrees before the cooling system pipes are filled with grout.

### **THE COVER**

Being constructed on the upper feeder of the distribution system, the monolithic siphon pictured on the cover of this issue is being constructed across Monrovia Canyon, and will connect Monrovia tunnels Nos. 3 and 4. The east portal of tunnel No. 4 may be seen at the top of the siphon, the invert of the tunnel being 91 feet above the invert at the bottom of the siphon.



Another picture of the Gene Wash damsite, showing the use of steel rails for reinforcing at the bottom of the dam. The first concrete for this structure was placed on October 23, and on November 20 the highest point in the dam was 27 feet above the lowest point in the foundation.

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#### **PUMPING PLANTS**

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Iron Mt.....B. H. Martin  
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er, Gen. Foreman.

San Jacinto Tunnel, District  
Force Acct., B. C. Leadbetter,  
Gen. Supt.; S. J. Shrode, John  
Austin and C. E. Sides, Tunnel  
Supts.; Chas. F. Thomas,  
Jr., Supt.; F. A. Backman, Gen.  
Foreman.

##### **(Distribution Tunnels)**

Monrovia Tunnels Nos. 1, 2  
and 3, West Construction Co.,  
H. E. Carleton, Gen. Supt.; E.  
M. Penn, Concrete Supt.  
Monrovia Tunnel No. 4, L. E.  
Dixon Co., Bent Bros., Inc., and  
Johnson, Inc., W. N. Evans,  
Supt.

##### **(Canal, Siphon, Conduit)**

Schedules Nos. 12 and 12A,  
Three Companies, Inc., John  
Will, Supt.  
Schedules Nos. 14, 15 and 16,  
Thompson - Starrett Co., Inc.,

Rodney Smith, Gen. Supt.; Wil-  
liam Hayes, Excav. Supt.

Schedules Nos. 18, 19 and 20,  
J. F. Shea Co., Inc., J. G.  
Shea, Gen. Mgr.; H. F. Ren-  
nebohm, Supt.

##### **(Distribution Pipe Line)**

Schedules No. 1P and 3P,  
American Concrete & Steel Pipe  
Co., Wm. A. Whiting, Gen.  
Supt.; D. H. Rankin, Plant  
Supt. and Const. Supt.

Schedules 6P and 7P, J. F.  
Shea Co., Inc., J. G. Shea, Gen.  
Mgr.; Ed. H. Shea, Gen. Supt.  
Schedule 9P, 10P, 11P, United  
Concrete Pipe Corp., John Hu-  
ber, Plant Supt.; Roy Richards,  
Construction Supt.

Schedules 2B and 2S, Western  
Pipe & Steel Co., L. L. White,  
Supt.

Schedules 8C, 9C, 12C, Basich  
Bros.; Tom Gogo, Supt.  
Schedules 21SC, 22SC, 23SC,  
J. F. Shea Co.

##### **(Dams)**

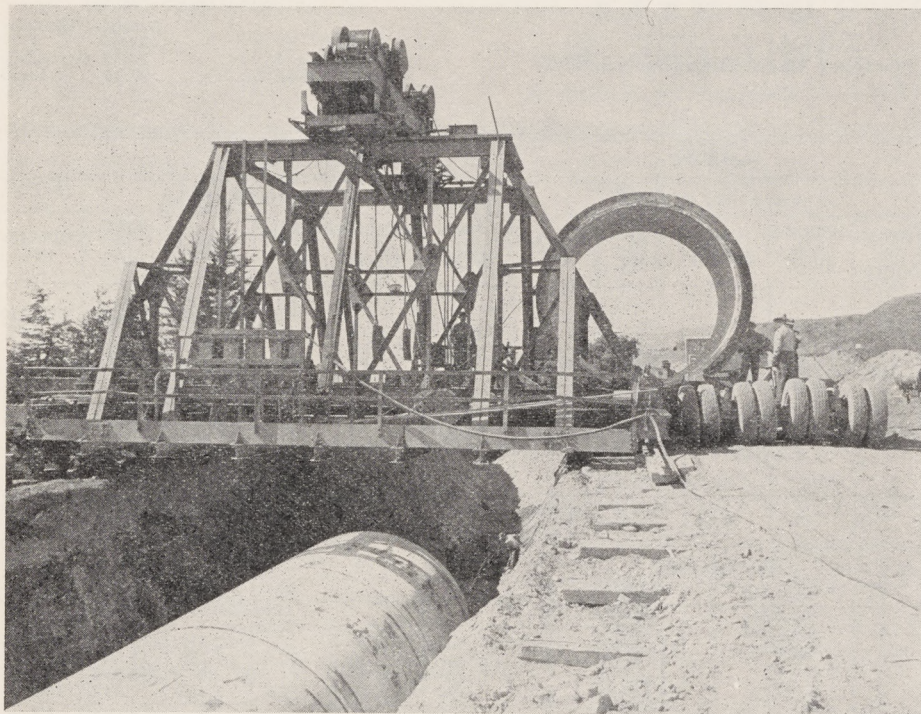
Cajalco dam, The Griffith Co.,  
Fronz Fohl, Gen. Supt.  
Parker Dam, J. F. Shea Co.,  
Frank Crowe, Gen. Supt., E. A.  
Moritz, Constr. Eng., U.S.B.R.  
Gene Wash dam, Copper Basin  
dam, J. F. Shea Co., Frank  
Crowe, Gen. Supt.

##### **(Pumping Plants)**

Intake and Gene, Winston  
Bros. and Crowell, R. A. Cro-  
well, Supt.; F. T. Hillman,  
Engr.

Eagle Mountain, L. E. Dixon  
Co.; J. H. Larkin, Supt.  
Hayfield, Dixon and Case;  
Crawford Strohacker, Supt.





Gantry of the J. F. Shea Co. placing the last precast sections in Distribution Schedule 7P. Pipe laying was completed on November 3. A total of 4,729 sections of 11 ft.-8 in. diameter precast concrete pipe was placed by this machine in Schedules 6P and 7P.

## American and Shea Companies Finish Pipe Laying Jobs

Reports from the Distribution Division state that pipe laying has recently been completed on two major features of the upper feeder of the distributing system. On November 3, the J. F. Shea Company crews completed the placing of the 11 ft.-8 in. precast concrete sections in Schedule 7P. This schedule, which is in the general vicinity of Claremont and San Dimas Wash, has a total length of 30,044 feet, and includes 2,456 lengths of pipe each 12 feet long. The difference of footage between the pipe sections and the total length of the schedule is made up in various structures, most of which are now completed. Included in the same contract was Schedule 6P consisting of 27,294 feet of precast pipe, and on which pipe laying was completed on March 16, 1937.

At the eastern end of the upper feeder, The American Concrete and Steel Pipe Company completed the placing of the precast sections in Schedule 1P on November 8. This line also has a diameter of 11 ft.-8 in., and has a total length of 12,277 feet. This schedule runs north from the Cajalco outlet tunnel and connects with the ten-mile steel siphon cross-

ing the Santa Ana River. An interesting feature in the construction of this schedule was the transportation of the giant pipe sections from the fabricating plant. Located at Rochester, about four miles east of Upland, this plant fabri-

## Contracts Awarded for \$413,077 of Aqueduct Fences

Said to be among the largest contracts ever to be awarded for fence construction, awards were made on November 19 by the Board of Directors for the construction of 154 miles of fences to be erected along aqueduct canals and reservoirs. Totalling \$413,077, contracts were awarded to three different companies. Schedule 1, amounting to 376,000 lineal feet of fence was awarded to the Anchor Post Fence Company of Los Angeles at its low bid of \$187,916.39. The Pittsburg Steel Company submitted a low bid of \$161,540.60 for the 307,800 lineal feet of fence in Schedule 2. A contract for the construction of Schedules 3, 4, and 5, totaling 128,600 lineal feet of fence was awarded to the Los Angeles Fencing Company based on its low bid of \$63,620.00. Included in the contracts are 215 gates. The fence will be woven wire construction, 5 ft.-11 in. high, and held up by steel posts 12 feet apart and set in concrete blocks.

cated all pipe for Schedules 1P, 3P, 4P, and 5P. Pipe for the last three schedules was handled by truck and trailer, but in the case of 1P it had to be shipped by rail to Arlington and then transhipped by trailer to the trench.



Night view of a concrete factory—the Parker Dam mixing plant on the Arizona bank of the Colorado River.



# CONSTRUCTION

## TUNNELS

TUNNEL EXCAVATION (MILES)		
	Completed	Remaining
Aqueduct	88.64	3.47
Distribution	16.20	0
Total	104.84	3.47

October 16 to November 15, 1937

TUNNEL LINING (MILES)		
	Completed	Remaining
Aqueduct	84.04	8.07
Distribution	13.09	3.06
Total	97.13	11.13

### AQUEDUCT

CONTRACTOR	TUNNEL	LENGTH IN FEET	EXCAVATION IN FEET					LINING IN FEET						
			NUMBER OF SHIFTS	AVERAGE PER SHIFT	THIS PERIOD	TOTAL TO DATE	REMAIN- ING	ARCH OR INVERT	NUMBER OF SHIFTS	AVERAGE PER SHIFT	THIS PERIOD	TOTAL TO DATE	REMAIN- ING	
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA	SAN JACINTO	(68,849)									(2,268)	(26,228)	(42,621)	
	Cabazon Shaft to East Portal	8,880		Completed		8,880	0	{ Arch Invert* Arch	0 0 59	0 0 42.5	(2,507)	(8,484) 8,484 2,855	(396) 396 23,962	
	Cabazon to Lawrence	26,817	93	8.6	802	17,955	8,862							
	Cabazon Pioneer	18,119		Suspended		7,274	0							
	Lawrence Adit	5,651	93	3.3	311	5,564	87							
	Potrero Pioneer	15,195		Suspended										
	Potrero to Lawrence	17,670	93	3.6	338	8,198	9,472	{ Invert* Arch Invert*	13 0	100.9 0	1,312 0	2,004 14,953 15,482	15,666 529 0	
	Potrero Shaft to West Portal	15,482		Completed		15,482	0							
		TOTALS	Ft. Miles 68,849 (13.04)	186	6.1	1,140 (0.22)	50,515 (9.57)	18,334 (3.47)	Arch Invert	59 13	42.5 100.9	2,507 1,312	26,292 25,970	42,557 42,879

### DISTRIBUTION

GRIFFITH CO.	CAJALCO OUTLET	2,368	Completed	2,368	0			0	2,341	0	
WEST CONSTRUCTION CO.	MONROVIA NO. 1 (From W.P.)	7,868	Completed	7,868	0	Full Sec. Invert* Arch	9    66	17.8    52.2	Completed	7,796	0
	MONROVIA NO. 2 (From Jct. 1)	940	Completed	940	0				Completed	856	0
	MONROVIA NO. 3	(32,105)	Completed	(32,105)	(0)				(2,913)	(18,772)	(13,323)
	East from Adit	11,340		11,340	0				160	11,444	
	West from Adit From West Portal }			5,913 }						19,352	1,299
		20,765		14,851	0				4,322	16,329	
DIXON, BENT BROS. & JOHNSON	MONROVIA NO. 4 (From W.P.)	8,133	Completed	8,133	0	0	0	0	Completed	5,275	2,858
	SAN RAFAEL No. 1 (From W.P.)	4,047	Completed	4,047	0				Completed	4,028	0
	SAN RAFAEL No. 2 (From E.P.)	5,669	Completed	5,669	0				Completed	5,661	0
	TOTALS	Ft. 61,130 Miles 11.58		61,130 11.58	0	Full Section	75	38.8	2,913 (0.55)	44,729 (8.47)	16,181 (3.06)

\*Invert considered to equal 0.2 completed section

## Miscellaneous Construction

October 31 to November 13, 1937

### AQUEDUCT PUMPING PLANTS AND APPURTENANT WORKS

CONTRACTOR	FEATURES	EXCAVATION—Cu. Yds.				CONCRETE—Cu. Yds.				STEEL—Tons			
		Est. Quan.	Period	To Date	%	Est. Quan.	Period	To Date	%	Est. Quan.	Period	To Date	%
WINSTON BROS. CO. & WILLIAM C. CROWELL	Intake Plant	128,930	0	128,930	100	23,260	312	21,533	92	1,757	47.4	1,557.9	89
	Gene Plant	89,306	0	89,306	100	14,100	97	14,035	99	2,016	17.8	1,959.0	97
WOOD AND BEVANDA	Iron Mt. Plant	354,909	0	354,909	100	22,942	0	22,942	100	1,796	0	1,795.7	100
L. E. DIXON CO.	Eagle Plant	268,681	0	260,303	97	27,565	347	24,367	88	2,253	1.9	1,636.4	72
L. E. Dixon & Case Const. Co.	Hayfield Plant	352,755	0	347,139	98	31,408	1,554	23,225	74	2,809	71.5	1,325.5	47
	TOTALS		0	1,163,087			2,310	106,102			138.6	8,274.5	

### PARKER RESERVOIR—SIX COMPANIES, INC.

FEATURES	Est. Quan.	Period	To Date	Percent
Diversion Tunnels—Excav.	3,463 Ft.	0	3,463	100
Diversion Tunnels—Concrete	3,363 Ft.	0	3,363	100
Cofferdams—Excav.	227,582 C.Y.	0	227,582	100
Cofferdams—Fill	464,890 C.Y.	0	464,890	100
Outlet Works—Excav.	220,000 C.Y.	0	207,176	94
Outlet Works—Concrete	5,000 C.Y.	146	3,735	75
Dam—Excavation	1,510,200 C.Y.	33,726	1,508,105	99
Dam—Concrete	297,900 C.Y.	31,769	191,159	64
Power House—Excav.	58,000 C.Y.	0	56,700	98
Power House—Concrete	14,000 C.Y.	760	760	5

### CAJALCO RESERVOIR—GRIFFITH COMPANY

FEATURES	Est. Quan.	Period	To Date	Percent
Diversion Tunnel	2,000 Ft.	0	2,000	100
Outlet App. Channel—Exc.	199,190 C.Y.	0	199,190	100
Outlet Tower—Concrete	3,290 C.Y.	54	3,114	94
Dam & Spillway—Exc.	757,800 C.Y.	1,650	686,800	91
Dam—Fill	3,463,300 C.Y.	90,400	3,116,200	90
Dam & Spillway—Concrete	27,030 C.Y.	1,065	21,270	79
Dike—Excavation	13,700 C.Y.	0	13,680	99
Dike—Fill	3,900,000 C.Y.	0	3,855,500	99
Dike—Concrete	44,100 C.Y.	0	42,160	96

### GENE WASH RESERVOIR—J. F. SHEA CO., INC.

FEATURES	Est. Quan.	Period	To Date	Percent
Dam—Excavation	7,500	0	7,500	100
Dam—Concrete	13,365 C.Y.	750	1,096	8
Spillway—Excavation	4,762	0	4,762	100
Spillway—Concrete	4,800 C.Y.	1,057	4,092	85
Dike—Excavation	4,000 C.Y.	0	1,840	46
Dike—Fill	10,500 C.Y.			
Dike—Concrete	1,200 C.Y.	0	200	17

### COPPER BASIN RESERVOIR—J. F. SHEA CO., INC.

FEATURES	Est. Quan.	Period	To Date	Percent
Dam—Excavation	8,700 C.Y.	200	6,200	71
Dam—Concrete	14,275 C.Y.			
Spillway—Excavation	4,800 C.Y.	0	4,300	90
Spillway—Concrete	450 C.Y.			
Outlet Works—Excavation	1,000 C.Y.			
Outlet Works—Concrete	2,215 C.Y.			
Gate House Superstructure				



# ION PROGRESS

## CANAL, CONDUIT AND SIPHON (MILES)

	Completed	Remaining
Excavation	142.28	3.32
Concrete	138.93	5.62
Back Fill	73.34	7.49

## CANAL, CONDUIT, SIPHON & PIPE LINES

October 31 to November 13, 1937

## DISTRIBUTION PIPE LINE (MILES)

	Completed	Remaining
Excavation	46.04	0.27
Concrete	45.97	0.34
Back Fill	44.86	1.45

### AQUEDUCT

SCHED. NO.	CONTRACTOR	FEATURES	Length In Feet	EXCAVATION—Feet			CONCRETE—Feet			BACKFILL—Feet		
				Period	To Date	Remain'g	Period	To Date	Remain'g	Period	To Date	Remain'g
14	THOMPSON-STARRETT CO.	Conduit and Siphons	32,366	0	32,366	0	0	32,366	0	0	32,366	0
15		Conduit and Siphons	35,849	0	35,849	0	0	35,849	0	0	35,849	0
16		Conduit and Siphons	19,254	955	12,080	7,174	2,632	8,685	10,659	3,753	6,703	12,551
18	J. F. SHEA CO., INC.	Conduit and Siphons	27,537	0	27,537	0	0	27,537	0	0	27,327	210
19	J. F. SHEA CO., INC.	Conduit and Siphons	37,105	2,624	26,800	10,305	2,263	18,801	18,304	0	11,384	25,721
20		Siphons	18,618	0	18,618	0	0	18,618	0	0	18,618	0
20 A & B	M. W. D.—FORCE ACCT.	Siphons	752	0	705	47	0	0	752	0	0	752
3	WINSTON BROS. CO. & WILLIAM C. CROWELL	Siphon (Gene Inlet)	1,877	0	1,877	0	0	1,860	17	0	1,478	320
4		Siphon (Copper Basin)	450	0	450	0	0	450	0	0	0	0
TOTALS			173,808	3,579	156,282	17,526	4,895	144,166	29,642	3,753	133,725	39,554

### DISTRIBUTION PIPE LINES

1	AMER. CONC. & STEEL PIPE CO.	Precast Concrete Pipe	12,277	250	12,277	0	262	12,277	0	1,200	11,852	425
2	WESTERN PIPE & STL. CO.	Welded Steel Pipe	54,530	0	54,530	0	0	54,530	0	3,169	53,501	1,029
3	AMER. CONC. & STEEL PIPE CO.	Precast Concrete Pipe	20,124	0	20,124	0	0	20,124	0	0	20,124	0
4		Precast Concrete Pipe	25,867	0	25,867	0	0	25,867	0	0	25,867	0
5		Precast Concrete Pipe	24,892	0	24,892	0	0	24,892	0	0	24,892	0
6	J. F. SHEA CO., Inc.	Precast Concrete Pipe	27,294	0	27,294	0	0	27,294	0	0	25,838	1,956
7		Precast Concrete Pipe	30,044	555	29,878	166	600	29,680	364	925	28,341	1,703
9	UNITED CONC. PIPE CORP.	Precast Concrete Pipe	8,697	0	8,388	309	0	8,388	309	0	7,863	834
10		Precast Concrete Pipe	10,517	0	10,517	0	0	10,517	0	0	10,450	67
11		Precast Concrete Pipe	4,105	0	4,105	0	0	4,105	0	0	3,197	908
IC-9C-12C	BASICH BROTHERS	Cast-in-Place Conc. Pipe	1,656	0	708	948	20	506	1,150	0	403	1,253
TOTALS			220,003	805	218,580	1,423	882	218,180	1,823	5,294	212,328	7,675

## Completed Features

### TUNNELS

	CONTRACTOR	TUNNEL	Length in Miles	Work Started	Work Completed
AQUEDUCT	MORRISON-KNUDSEN CO.	Mecca Pass, No. 1, 2 & 3	1.13	7-17-33	2-10-35
	WEST CONSTRUCTION CO.	Whitewater Nos. 1 & 2	1.94	7-18-33	4-15-35
	SHOFNER & GORDON	Hayfield No. 2	1.03	7-8-33	7-27-35
	HAMILTON & GLEASON	Bernasconi	1.18	4-19-33	11-21-35
	J. F. SHEA CO., INC.	Cottonwood	3.81	6-14-33	12-29-35
	HUNKIN-CONKEY CON. CO.	Hayfield No. 1	1.84	10-21-33	1-9-36
	DIXON & BENT BROS.	W. Eagle—West Portion	2.02	8-9-33	3-12-36
	DRAVO CONTRACTING CO.	Valverde	7.20	6-7-33	10-18-36
	WALSH CONSTRUCTION CO.	Colorado River	1.04	3-2-34	1-29-36
	WALSH CONSTRUCTION CO.	Copper Basin Nos. 1 & 2	2.32	10-4-33	2-20-36
	WALSH CONSTRUCTION CO.	Whipple Mountain	6.11	8-25-33	1-26-37
	UTAH CONSTRUCTION CO.	Iron Mt.—West Portion	3.07	5-15-33	10-23-36
	WINSTON BROS. CO.	Iron Mt.—East Portion	4.48	8-9-33	10-30-36
	METRO. WATER DIST.	1000 Palms No. 1	3.04	1-25-33	1-7-37
	"	1000 Palms No. 2	0.73	2-24-33	12-19-35
	"	Wide Canyon No. 1	2.71	3-31-33	2-11-37
	"	Wide Canyon No. 2	0.16	3-24-33	2-12-37
	"	Seven Palms	3.17	4-27-33	2-2-37
	"	Long Canyon	2.90	3-6-34	12-31-36
	"	Blind Canyon	1.29	3-22-34	12-3-36
	"	Morongo No. 1	1.08	4-21-34	1-20-37
	"	Morongo No. 2	0.36	12-29-34	1-5-37
	BRODERICK & GORDON	West Eagle Mt.—E. Portion	3.00	2-8-34	5-6-37
	WINSTON BROS.	Coxcomb	3.37	9-15-33	4-26-37
	METRO. WATER DIST.	East Coachella	18.30	1-25-33	5-8-37
	BRODERICK & GORDON	East Eagle Mt.	1.79	6-8-34	7-23-37
TOTALS			79.07		
DISTRIBUTION	J. F. SHEA CO., INC.	Sierra Madre	1.27	9-1-35	10-31-36
	DIXON, BENT BROS. & JOHNSON	Pasadena Extension	1.05	10-5-35	11-24-36
	DIXON, BENT BROS. & JOHNSON	Pasadena	2.30	2-11-35	4-29-37
TOTALS			4.62		

### CANAL, CONDUIT, SIPHON, AND PIPE LINES

	CONTRACTOR	FEATURE AND NAME OR SCHEDULE	Length in Miles	Work Started	Work Completed
AQUEDUCT	UNITED CONCRETE PIPE CORP.	Little Morongo Siphon	0.13	2-27-34	8-20-34
	METRO. WATER DIS.	Fan Hill Conduit and Siphon	0.32	10-21-33	11-19-34
	MORRISON-KNUDSEN CO.	Sch. No. 18-J, Big Morongo and San Andreas Siphon	1.86	2-12-35	9-16-36
	GRIFFITH COMPANY	Sch. No. 20-C, 21, 22, 23 & 23-A	12.79	1-5-35	10-13-36
	JAHN & BRESSI CONST. CO.	Sch. No. 5, Canal and Siphons	10.15	12-18-34	11-17-36
	JAHN & BRESSI CONST. CO.	Sch. No. 4, Canal and Siphons	10.08	6-6-35	3-18-37
	UTAH CONSTRUCTION CO.	Sch. No. 9, Canal, Conduit & Siph.	8.97	12-12-34	5-15-37
	BARRETT-HILP & MACCO CORP.	Sch. No. 2, 3, 7, Canal, Con. & Siph.	18.71	12-3-34	5-25-37
	METRO. WATER DIST.	Sch. No. 17, Conduit and Siphons	4.16	9-9-35	6-15-37
	AQUEDUCT CONST. CO	Sch. No. 1, 10, 11, 13 Canal, Con. & S.	26.99	1-24-35	6-24-37
	WOOD & BEVANDA	Sch. No. 6, 8, Canal & Siphons	12.28	11-27-34	7-28-37
	THREE COMPANIES, INC.	Sch. No. 12, Conduit & Siphons	6.24	1-8-35	11-6-37
TOTALS			112.68		
DISTRIBUTION	UNITED CONCRETE PIPE CORP.	Sch. No. 8P, Precast Concrete Pipe	4.65	2-21-36	3-20-37



## Lining of Cajalco Outlet Tunnel Completed

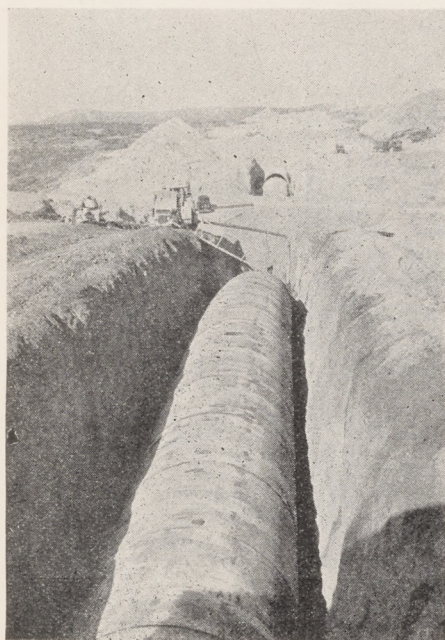
Shooting of gunite lining on the inside of the 14-foot diameter Cajalco outlet tunnel was completed on November 1, thus completing the lining of this tunnel which is made up of steel cylinders backed with concrete and coated on the inside with two inches of gunite. The tunnel, which has a lined length of 2,341 feet, was constructed by Broderick and Gordon under a subcontract with the Griffith Company who has the contract for the construction of the Cajalco reservoir.

Excavation of the tunnel was started on May 25, 1936, and completed on October 26 of the same year. Installation of the steel liners, which were fabricated by the Consolidated Steel Company of Los Angeles, was delayed for a time due to the maritime strike of last spring which held up steel shipments from the east. Installation of these liners and concreting back of them was done by Broderick and Gordon, while the guniting was subcontracted to the California Guniting Company.

### SAFETY FLAG AWARDS

#### San Jacinto Tunnel

Potrero was awarded the Safety Flag Award for the month of October. Accident frequencies in the tunnel were reduced 27 per cent in the first ten months of 1937 as compared with the same period in 1936.



Construction of Schedule 1P on Distribution Division. See story page 3.

# MONTHLY REPORT REVIEWS ACTIVITIES ALONG THE AQUEDUCT LINE

(EDITOR'S NOTE: The following is a brief summary of some of the activities of the District as set forth in the monthly report of General Manager F. E. Weymouth, filed with the Board of Directors in November, covering the work done in October.

### Legal Division

Necessary documents were prepared to secure payment for Interim Certificates Nos. 72 and 73, each in the denomination of \$1,800,000, representing bonds heretofore sold to the R. F. C. Payment for these certificates was made on October 11 and 25.

### Miscellaneous Activities Division

During the month of October, 512 applicants were cleared through the Labor Employment office. Of this number, 250 were made available in response to requisitions for force account work, and 262 were made available for aqueduct contractors. A total of 813 applications were filed.

### Field Engineering and Construction

*Safety Engineering*—See safety awards, column one.

*Testing Laboratory*—Approximately 77,000 barrels of cement were sampled and tested. In addition to routine chemical tests, sulphate tests are being made on 29 soil samples from the Eagle Rock-Palos Verdes cross feeder.

*Operation of Utilities*—During the period September 16 to October 15, 4,611,567 kw/hr of power was used, 14,617 long distance telephone calls were handled, and 3,195,243 cubic feet of water was delivered.

*Aqueduct Construction*—See progress tables, pages 4 and 5. Excavation and trimming of the abutments for the Gene Wash dam were completed, and the first concrete in the dam was placed on October 23, 1937. A total of 347 cubic yards of concrete was in place at the end of the month. Main heading excavation in the San Jacinto tunnel was advanced 0.17 mile, leaving 3.58 miles to be excavated. Contractors on open work resumed concreting operations on October 1, 1937. All contracts are complete with the exception of Schedules 16 and 19.

### Civil Engineering Division

*Specifications*—Bids were received on four sets of specifications during October, and five sets of specifications were issued during the month.

*Design*—Work continued throughout the month on the design of structures for the lower part of the Palos Verdes cross feeder. Design and construction details

were worked out for the suspension bridge for the Cajalco outlet tower, and work was continued on sand trap machinery layouts.

*Materials*—Shipments of cement totaling 122,638 barrels were made to the field during the month.

### Distribution Division

*Office and Field Engineering*—Work was continued on the preparation of final plan and profile drawings for the Palos Verdes feeder south of 98th Street. Plans and estimates were completed for the Hazel road at Cajalco reservoir.

*Field Construction*—See progress tables pages 4 and 5. The concreting of the Cajalco outlet tower superstructure was completed during the month. Casting of precast concrete pipe for upper feeder Schedules 1P and 3P was completed on October 14.

### Electrical Engineering

*Office Engineering*—A study of the power requirements for the balance of the construction period was made to determine what saving might be made by using Boulder power for construction purposes. Work was continued on the drawings for the lower pumping station for Lawrence adit.

*Field Construction*—See progress tables 4 and 5. Concreting of various plant features was under way at the Intake, Gene, Eagle Mountain, and Hayfield pumping plants, and force account installation of pumping plant equipment was continued at the Iron Mountain plant.

### Personnel Division

Fifty-nine classified positions were filled during the month. There were 1,127 changes of status, 647 terminations, and 486 employment contracts recorded during the period.

### Purchasing Division

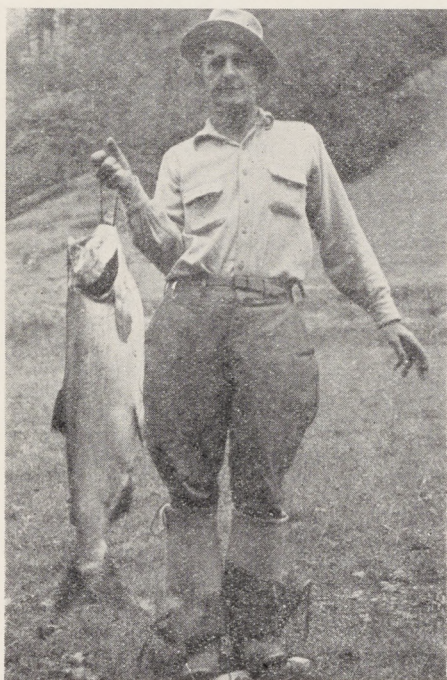
A total of 1,324 purchase orders were issued amounting to \$129,679. Carload forwardings for the month numbered 522, the largest single item being 416 cars of cement.

### Accounting and Costkeeping

The total cost of work accomplished to October 31, 1937, was \$149,137,580.



# NEWS FROM FIELD AND OFFICE



Here he is, folks—Bill Sheffey (Banning General Storekeeper) the man who never fished before, and the Chinook Salmon that he took on the Umpqua River in Oregon while under the tutelage of Harry Keeler of Purchasing.

Ladies and Gentlemen, this is Billy Boop, your favorite socialite news gatherer, announcing from the office of the chairman of the employees Christmas Party Committee. The great room is hushed now as we listen in on an important conference between Charles Brandt, chairman of the committee, and Everett Farmer, president of the M.W.D. Employees Association. It is indeed a solemn moment, because President Farmer has just broken down and confessed that the employees association is going to gander (donate to youse guys and gals) a good round sum from its treasury to make the annual party a whooping success. This being the first broadcast from one of these moment—gigantic is the better word—conferences, you may not know that the party is to be a dinner dance. The date is Saturday, December 18, 1937. The price \$1.25 per plate. AND, you're all invited. When the affair begins (at 8:00 P. M.) you'd better have your ticket, because, based on past affairs, this will be an early sell out. Because of the donation by the Association, the committee will be able to have an excellent party which will cost much more than the \$1.25 per item that youse guys are gonna put up

## Aqueduct Temperatures

November 1 to November 15

	Max.	Min.
Div. 1 .....	93°	47°
Div. 2 .....	90°	45°
Div. 3 .....	89°	45°
Div. 4 .....	86°	53°
Divs. 5 and 6.....	85°	32°

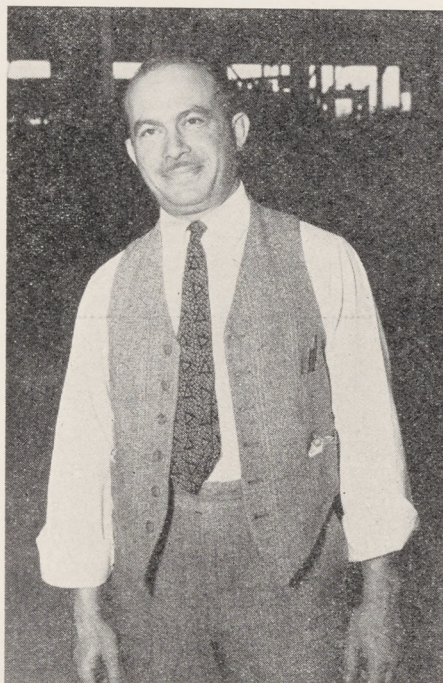
for youse and youse gal friends. Bye the bye, all aqueduckers, and friends of aqueduckers, are invited.

Well, we see that our time is up (sponsors didn't lay enough on the line to keep this up forever), and so until next time, the committee and I say Cheerio.

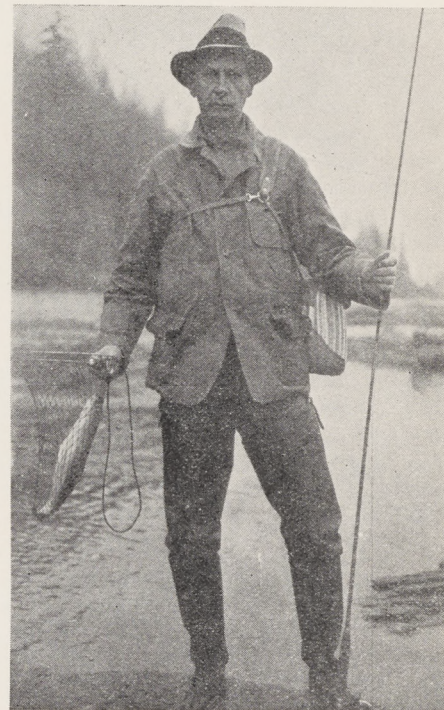
Ed. Note: In case that Billy Boop's sponsors get wise to themselves—watch your papers and bulletin boards for further information.

\* \* \*

Jack Wittman, formerly in the Mails and Files section of the Los Angeles office, has been transferred to the Labor Employment Office.



This genial gentleman is James A. MacDonald, superintendent of the Baldwin Park plant of the United Concrete Pipe Company. Under his direction, precast concrete pipe sections have been fabricated for installation in distribution schedules Nos. 8P, 9P, 10P, and 11P. He is also well known to aqueduckers on the desert section of the big job.



You'd probably look sour too if this was your prize, while your pupil was catching a big'un like the one in column one. This is Instructor Harry Keeler with the Salmon Trout that he took while teaching Bill Sheffey how to fish. In refutation of unkind remarks directed his way as a result of the fishing expedition, Harry quotes what he says is an old German proverb, to wit, "The stupidest farmers have the biggest potatoes."

R. M. Crawford, Chief of Accounts for the District, resigned on November 15. After a number of weeks of vacation, he will be located in a private enterprise in Los Angeles. Mr. Crawford had been with M.W.D. since August, 1931. Prior to coming with the District he had had a great deal of experience as an Industrial Engineer and Public Accountant both in Southern California and in the mid-west.

\* \* \*

"Driving Power" was the subject of a monologue presented by Mrs. Charles Pankratz at the President's dinner of the California Federation of Women's Clubs in Long Beach, November 16, 1937, in which she paid tribute to the Southern California men and women who are building the aqueduct. Mrs. Pankratz, who is the Riverside County President of the Federation, is the wife of Charles Pankratz, now master mechanic for the Eagle Mountain and Hayfield pumping plants, and who was formerly well known on the Coachella Division.



## Cabazon Crews Drive 222 Feet in One Week

San Jacinto's rambling Cabazoneers again broke into the limelight, when, during the week ending November 20, they drove 222 feet of tunnel. This is an average of 31.7 feet per day, and is just ten feet short of the all-time record for a single heading in the San Jacinto tunnel which was made in the West Portal during the week ending June 8, 1935.

During the first twenty days of November, the Cabazon crews drove 572 feet of tunnel at an average of 28.6 feet per day, as compared with the 13.2 foot per day average that has been established since the District took over the job.

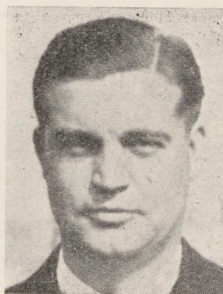
Superintendent John Austin's crews at Lawrence adit have been busy for the last few days widening and deepening the lower end of the adit which is now on level grade, and the end of which is only 67 feet from the main line of the San Jacinto tunnel. This chamber being enlarged has a maximum height of 22 feet and a maximum width of 23 feet. The bottom of the section is 8 feet below tunnel line at the end of the adit. This lower section of the chamber will have a two compartment sump in it to collect water, and over a part of which the pumping station will be erected. Ahead of this will be a skip chamber which will allow the tunnel muck cars to be dumped directly into the skip hauling muck to the surface.

Between November 1 and 15, the Potrero east heading No. 3 was advanced 143 feet. On the latter date, the heaviest water flow ever intercepted in the tunnel was encountered. During the week ending on the 20th, a maximum flow at the face of 6,000 gallons per minute was recorded.

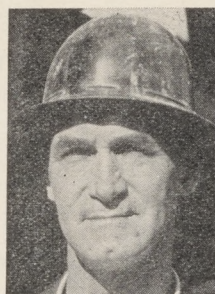
## 6,000,000 BARREL CEMENT CONTRACT COMPLETED

In its monthly report to the General Manager, the materials section of the design division reported that October saw the completion of contract 141 with California Portland Cement Co., Monolith Portland Cement Co., Riverside Cement Co., and Southwestern Portland Cement Co. This contract was executed on December 14, 1934, and has involved the furnishing of 6,000,000 barrels of cement, for which total contract payments aggregated \$8,339,065.

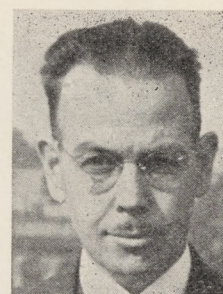
## Who's Who On the Aqueduct



H. V. Crawshaw



C. F. Thomas, Jr.



E. H. Riggs

### H. V. CRAWSHAW

*Assistant Engineer, Los Angeles Office, Distribution Division, Metropolitan Water District.*

Born April 23, 1903, in Minneapolis, Minnesota . . . Studied civil engineering at the University of Minnesota, and at the University of California, Los Angeles . . . Worked for Hollywood Sign Company, 1924-1925 . . . 1925-1926, draftsman, Southern Pacific Railroad, Los Angeles . . . Has been on Colorado River Aqueduct project since August, 1926 . . . Worked on project for Los Angeles Water Department in Banning, general office engineering . . . Preliminary field location surveys on main aqueduct, and transferred to Los Angeles office, Distribution Division in 1932 . . . In charge of distribution drafting and specification drawings . . . Is married and has a son . . . Known as "Harry," although "H" stands for Harris.

### CHARLES F. THOMAS, Jr.

*Construction Superintendent in charge of concreting, San Jacinto tunnel, Metropolitan Water District.*

Born July 10, 1885, in Rochester, Nebraska . . . Experience in mining and underground work dates back to 1907 . . . 1907-1910, mucker, machine-man, shift boss, on mines and tunnels in San Juan mining region, western Colorado . . . 1910-1913, foreman on dam and canal construction for Orchard Construction Co., Palisades, Colorado . . . 1913-1917, High Line Project, Grand Valley, Colorado (Coal mining), tunnel foreman on excavation and concreting of two large diameter bores, and 1914-1917, superintendent in charge of operation of coal mine . . . 1917-1918, superintendent of mining properties for Book Cliff Railroad Co., Grand Junction, Colorado . . . 1918-1920, private surveyor . . . 1920-1926, manager and part owner of coal mine at Grand Junction, Colorado . . . 1926-1928, foreman, superintendent, and cashier, for Strange Paving Company, street and highway construction, Salt Lake City,

Utah . . . 1928-1929, paving foreman for Oswald Brothers, Los Angeles, construction of Telegraph Road . . . 1929-1930, superintendent and cashier, street construction, Hales Company, Santa Ana, Calif. . . . 1930-1931, street and highway construction in Los Angeles and Long Beach . . . 1931-1932, concrete plant foreman, J. F. Knapp Co., Oakland, Calif. . . . 1932, foreman for F. W. Teschke, on construction of 6th Street Viaduct, Los Angeles . . . Has been with M.W.D. since 1933 . . . Originally employed on Coachella tunnels at Berdoo Camp . . . Transferred to San Jacinto tunnel in 1936 . . . Is married and has one daughter.

### E. H. RIGGS

*Assistant Engineer, Electrical-Mechanical Division, Metropolitan Water District.*

Born in Indianola, Iowa, on December 12, 1904 . . . Graduated from California Institute of Technology, B.S. in Civil Engineering, 1927 . . . 1927-1930, employed by Southern California Edison Company, construction survey party, special student training course, and 1928-1930, Assistant Purchase Engineer . . . Has been with Metropolitan Water District since June, 1930 . . . Was acting purchasing agent 1930-1932, and Assistant Purchasing Agent, 1933 . . . Transferred to Electrical-Mechanical Division in 1933, and has since been in charge of specifications for that division . . . Is a Lieutenant in Corps of Engineers Reserves, U.S.A. . . . Married.

## BIDS CALLED FOR ON GATES AND FITTINGS

Bids are to be opened on December 3, under specifications No. 254 for furnishing nine inlet gates, with gate guides and hoists, to be used at the Intake pumping plant. The gates will be made of cast iron and are to be 7 ft.-8 in. x 7 ft.-8 in.